

# Fabshield<sup>®</sup> 21B

## DESCRIPTION:

**Fabshield 21B** is a general purpose self-shielded flux-cored wire designed for the single-or multi-pass welding of thin gage to 3/4" thick mild or galvanized steels. Great for welding fillet or lap welds, you will find that this all-position wire has high operator appeal, producing a smooth spray-like arc transfer with low spatter levels, excellent weld bead appearance, and easy to remove slag.

## APPLICATIONS:

Machine parts, tanks, prefab construction, light structurals, short assembly welds, railroad car repairs, and other general fabrication.

## FEATURES:

- Excellent operator appeal
- Versatile
- Self-shielded
- Excellent bead appearance
- Excellent slag removal

## BENEFITS:

- Reduces welding fatigue for increased productivity
- Ideal for a variety of applications
- No external shielding gas required
- Helps to ensure weld integrity and eliminate re-work
- Makes clean-up easy and quick

**SHIELDING GAS:** None required

## TYPICAL WELD METAL PROPERTIES\*(Chem Pad):

Weld Metal Analysis	
Carbon (C)	0.28
Manganese (Mn)	0.34
Silicon (Si)	0.15
Phosphorus (P)	0.008
Sulphur (S)	0.003
Aluminum (Al)	1.04

## TYPICAL MECHANICAL PROPERTIES\*(AW):

Tensile Strength	91,000 psi (627 MPa)
Yield Strength	62,000 psi (427 MPa)
Elongation % in 2"	22%

**TYPICAL CHARPY-V-NOTCH IMPACT VALUES\* (AW):** Not applicable

## CONFORMANCES AND APPROVALS:

- AWS A5.20, E71T-11, ASME SFA 5.20, E71T-11
- ABS E71T-11
- CWB E491T-11-H8

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with AWS A5.20 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers Company.

Hobart Brothers Company • 400 Trade Square East • Troy, OH 45373  
PH: (800) 424-1543 • FX: 800-541-6607 • www.hobartbrothers.com



## WELDING DATA:

The information listed below was determined by welding performed with DCEN welding current.

Diameter Inches mm	Optimum Welding Parameter	Weld Position	Amps	Volts	Weld Feed Speed in/min	Deposition Rate lbs/hr	Stickout ±1/4"
.035 0.9	*	Flat, Horizontal, Vertical-Up, Overhead	55	17.0	75	1.76	1/2"
.035 0.9		Flat, Horizontal, Vertical-Up, Overhead	80	19.0	110	2.06	1/2"
.035 0.9		Flat, Horizontal, Vertical-Up, Overhead	120	20.0	160	2.54	1/2"
.045 1.2	*	Flat, Horizontal	115	15.0	105	1.40	1/2"
.045 1.2		Flat, Horizontal	160	16.5	170	2.76	1/2"
.045 1.2		Vertical-up	130	16.0	125	1.80	1/2"
.045 1.2		Overhead	130	16.0	125	1.80	1/2"
.045 1.2		Vertical-down	200	18.0	195	3.49	1/2"
1/16 1.6	*	Flat, Horizontal	160	18.0	70	2.10	3/4"
1/16 1.6		Flat, Horizontal	210	19.0	110	3.43	3/4"
1/16 1.6		Flat, Horizontal	260	20.0	145	4.84	3/4"
1/16 1.6		Vertical-up	185	18.0	90	2.90	3/4"
1/16 1.6		Overhead	190	18.0	100	3.20	3/4"
1/16 1.6		Vertical-down	200	18.0	100	3.20	3/4"
.068 1.7	*	Flat, Horizontal	145	18.5	49	1.92	3/4"
.068 1.7		Flat, Horizontal	230	20.0	94	3.54	3/4"
.068 1.7		Flat, Horizontal	255	21.0	111	5.16	3/4"
.068 1.7		Flat, Horizontal	315	22.0	159	7.38	3/4"
.068 1.7		Vertical-up	155	18.0	60	2.32	3/4"
.068 1.7		Overhead	185	17.0	70	2.69	3/4"
.068 1.7		Vertical-down	240	18.0	100	4.19	3/4"
5/64 2.0	*	Flat, Horizontal	215	19.0	67	3.22	1"
5/64 2.0		Flat, Horizontal	265	21.0	90	4.70	1"
5/64 2.0		Flat, Horizontal	315	22.5	124	7.10	1"
5/64 2.0		Vertical-up	185	16.0	55	2.62	1"
5/64 2.0		Overhead	190	18.0	60	2.78	1"
5/64 2.0		Vertical-down	220	18.0	70	3.52	1"
3/32 2.4	*	Flat, Horizontal	250	18.5	57	4.98	1"
3/32 2.4		Flat, Horizontal	300	20.0	75	6.48	1"
3/32 2.4		Flat, Horizontal	300	21.5	75	6.48	1"

## CAUTION:

Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

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